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United States  
Department of  
Agriculture

**Forest Service**

Tongass  
National Forest  
R10-MB-624

June 2008



# Baht Timber Sale

## Record of Decision II

Tongass National Forest  
Wrangell Ranger District  
Wrangell, Alaska



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Cover photo: view of Zarembo Island

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United States  
Department of  
Agriculture

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Tongass National Forest

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File Code: 1950-3

Date: June 12, 2008

Dear Reader:

Enclosed is your copy of the second Record of Decision (ROD) for the Baht Timber Sale Final EIS (July 2007) on the Wrangell Ranger District, Tongass National Forest in southeast Alaska. This second decision supplements the decision made in July 2007. This second decision includes two units and the associated roads needed for access. These units, although part of the Selected Alternative, were deferred from the July 2007 decision since they were partly within inventoried roadless areas. This second decision is in accordance with the settlement agreement for the Natural Defense Resource Council, et al. vs. U.S. Forest Service, et al. Case No. 1:03-cv-0029-JKS, Case No. 1:04-cv-0010-JKS, Case No. 1:04-cv-0029-JKS, and Case No. 1:06-cv-0005-JKS. This settlement agreement states, in part, that:

"The Forest Service will not sign new records of decision (RODs) or other decision documents for timber sales in inventoried roadless areas (as shown in the 2003 Final Supplemental Environmental Impact Statement for TLMP) or Kuiu Island until 30 days after the publication in the Federal Register of the notice of availability of the final environmental impact statement (FEIS) for the TLMP review process now underway ..."

The Record of Decision for the Forest Plan Amendment was completed on January 23, 2008 and was effective on March 17, 2008. The 2008 Forest Plan Amendment ROD contains transition language for timber sale projects already being planned. This language identifies three different categories of projects, depending on how far along they are in the planning process. The Baht project is in Category 2, which requires the Forest Supervisor to review the project and incorporate the new direction in the amended Forest Plan without causing major disruptions in the implementation of the project. I have determined that the Baht Timber Sale Area project is fully consistent with the transition direction contained in the 2008 Forest Plan Amendment ROD.

The ROD for the Forest Plan Amendment adopts the Timber Sale Program Adaptive Management Strategy, under which portions of the suitable land base become available in three phases. The Baht Timber Sale Area project is within the Phase 1 portion of the suitable land base and therefore this project can be implemented as planned. Phase 1 includes most of the roaded portion of the suitable lands and those portions of roadless areas determined to be of lower value which are often adjacent to the roaded lands and accessed by extensions of the existing road system.



Copies of this Record of Decision have been sent to everyone on the project mailing list. Copies are also available for review at public libraries and Forest Service offices throughout the Tongass. If you would like more information please contact the Wrangell Ranger District at 907-874-2323 or email Mark Hummel at: [mhummel@fs.fed.us](mailto:mhummel@fs.fed.us).

Sincerely,

A handwritten signature in black ink that reads "Scott Snelson" followed by the word "for" in a smaller, less distinct script.

FORREST COLE  
Forest Supervisor

cc: Cynthia Sever, Cynthia E Schelin

# Record of Decision II

## Baht Timber Sale

USDA Forest Service  
Wrangell Ranger District  
Tongass National Forest  
Alaska Region

### Introduction

The 57,600-acre Baht project area is located on the northern half of Zarembo Island in southeast Alaska and is approximately 17 air miles west of Wrangell, Alaska (see ROD II Selected Alternative map at the end of this document). Previous timber harvest has taken place in the area and there are two existing log transfer facilities (LTFs) with associated roads. There are 100 miles of existing road on Zarembo Island but the road system does not connect to any community. There are 1,652 acres of State land within the project area boundary. Two inventoried roadless areas are partially within the project area boundary.

This Record of Decision (ROD) documents my decision to implement additional activities from the Baht Timber Sale Final Environmental Impact Statement (FEIS) published in July 2007. This decision includes harvesting two units partially within inventoried roadless areas and augments the Baht Timber Sale Record of Decision signed on July 25, 2007. The 2007 decision included only those activities within the roaded portion of the project area as identified by the 2003 Forest Plan SEIS.

This second decision on the Baht Timber Sale is in accordance with the settlement agreement for the Natural Defense Resource Council, et al. v. U.S. Forest Service, et al. Case No. 1:03-cv-0029-JKS, Case No. 1:04-cv-0010-JKS, Case No. 1:04-cv-0029-JKS, and Case No. 1:06-cv-0005-JKS. This settlement agreement states, in part, that:

“The Forest Service will not sign new records of decision (RODs) or other decision documents for timber sales in inventoried roadless areas (as shown in the 2003 Final Supplemental Environmental Impact Statement for TLMP) or Kuiu Island until 30 days after the publication in the Federal Register of the notice of availability of the final environmental impact statement (FEIS) for the TLMP review process now underway ...”

The decision for the 2008 Forest Plan Amendment ROD was signed on January 23, 2008. The notice of availability of the Forest Plan Amendment FEIS was placed in the Federal Register on February 15, 2008. The effective date for implementation of the 2008 Forest Plan was March 17, 2008, which was 30 days from this notice. Therefore, this decision is allowed at this time.

## Decision

This decision includes harvesting Unit 3 and Unit 17 and providing the associated road access. These units were identified for inclusion in the Selected Alternative for the project but were not included in the Record of Decision for the Baht Timber Sale since they were partially within inventoried roadless areas.

In making my decision, I considered and balanced the information in the environmental analysis in the Baht Timber Sale Final EIS, including the supporting documentation in the project record, as well as agency, tribal, and public comments received on the project before making my decision. The decision meets the purpose and need for the project, is consistent with the transition language in the 2008 Forest Plan Amendment Record of Decision and is responsive to issues raised during scoping, information gathered during the environmental analysis, and public and agency comments on the Draft EIS.

### Features of this Decision

1. This decision includes clearcut, ground-based timber harvest of Units 3 and 17 from the Baht Timber Sale Final EIS (see ROD II Selected Alternative map at the end of this ROD). This decision will harvest approximately 123 acres of commercial forest land within these two planned units. Unit design includes the acres that are retained for legacy structure as required by the Forest Plan and described on the unit cards in Appendix 1. These units will contribute approximately 4.3 million board feet of gross volume, including 2.3 million board feet of net sawlog volume to the Tongass National Forest timber sale program.
2. The Selected Alternative includes 2.3 miles of road construction, which will be decommissioned after timber sale activities are completed. These roads are displayed on the unit cards, Appendix 1. Deep Bay and St. John Bay LTFs may be used to transport the timber using barging and/or rafting.

## Reasons for the Decision

In making my decision, I considered the objectives to meet the Purpose and Need for this project as well as the issues and concerns raised during scoping, and comments on the Draft EIS. I considered Forest Plan direction relevant to this project and the competing interests and values of the public. I considered all viewpoints and incorporated them where feasible and consistent with the Purpose and Need of the project. I carefully considered the comments of those opposing this project.

I evaluated the trade-off between resource protection, social values, and timber sale economics. The Selected Alternative provides a beneficial mix of resources for the public, within a framework of existing laws, regulations, policies, public needs and



desires, and the capabilities of the land, while meeting the stated Purpose and Need for this project. My decision to implement the Selected Alternative conforms to the Forest Plan and National Forest Management Act (NFMA).

I considered the need to manage this timber resource in order to produce an even-flow of sawtimber and other wood products on a sustained yield and economical basis. I considered the concerns for economical timber sale offerings and the need to meet annual demand for timber. This decision provides an estimated 2.3 MMBF toward meeting annual market demand. Potential annualized jobs supported are between nine and thirteen. This range of jobs accounts for the variety of options the timber purchasers have under the limited interstate shipping policy and export policies. The purchasers may elect to process all the sawlogs locally or to ship up to 50 percent of the total sawlog volume of all species and 100% of the utility volume to markets which may reduce support for sawmilling jobs. For this project, this could be primarily interstate shipment to the lower 48 of unprocessed Sitka spruce and western hemlock sawlogs that are: a) smaller than 15 inches in diameter at the small end of a 40-foot log, or b) grade 3 or grade 4 logs of any diameter. Currently, western redcedar identified as surplus to Alaska domestic needs and all Alaska yellow-cedar may be exported to domestic and foreign markets at the purchaser's options.

I considered the cumulative watershed effects of this project combined with past harvest. Resource conditions remain above established standards and the project design as well as implementation guidelines will limit resource effects to acceptable levels.

I considered the effect to deer winter range and potential for increased fragmentation. Although high value deer habitat will be reduced and fragmentation may increase, deer habitat capability remains above acceptable levels at 20 deer per square mile.

I considered the public's concerns related to subsistence uses, especially of deer. Testimony from subsistence hearings was considered in this decision. Through the analysis process, it was determined that there would be no significant possibility of a significant restriction for subsistence use for any species.

I considered the effects to scenery. Although scenery was a concern for the portion of the project within the Scenic Viewshed LUD, these two units are within the Timber Production LUD and meet the adopted Forest Plan Visual Quality Objectives.

I considered the effects of harvest to roadless area values. Units 3 and 17 are partially within inventoried roadless areas. The effects were analyzed and disclosed and are the same as those effects displayed for Alternative 2 in the Baht Timber Sale Final EIS. All three inventoried roadless areas on Zarembo Island were determined to be lower value roadless areas through analysis for the Forest Plan Amendment and are included in Phase 1 of the Timber Sale Program Adaptive Management Strategy in the 2008 Forest Plan Amendment ROD.

Forest health will improve by removing dwarf mistletoe-infected trees and by creating younger, more-vigorous growing forest. Timber volume lost to windthrow will be minimized with the use of even-aged management. Long-term productivity, growth, and yield would be enhanced.

In making this decision, I considered the comments received about climate change on the 2008 Forest Plan Draft EIS and reviewed the analysis in the 2008 Forest Plan Amendment Final EIS. That forest-wide analysis discusses the risk of possible effects and the considerable uncertainty concerning specific predictions of how the climate may change, and even more uncertainty regarding the effects of climate change on the resources of the Tongass National Forest. In this context, climate change is not essential to a reasoned choice among the alternatives considered in the Baht Timber Sale project analysis. The Tongass National Forest will continue to monitor potential effects of climate change through the existing Forest Plan monitoring programs, and other studies that are happening regionally and nationally. Any needs for a different course of action that might affect this decision will be addressed through existing procedures to determine whether changes are warranted.

## 2008 Forest Plan

The amendment to the Forest Plan (using the 1982 planning regulations) was completed while the Baht Timber Sale project was going through environmental analysis. The Forest Plan Amendment DEIS was released in January 2007 and the extended public comment period ended on April 30, 2007. The 2008 Forest Plan Amendment was completed with the signing of the Record of Decision (ROD) on January 23, 2008, and is effective on March 17, 2008. The ROD for the Forest Plan Amendment adopts a Timber Sale Program Adaptive Management Strategy, under which portions of the suitable land base become available for project-level planning in three phases. The Baht Timber Sale project area is within the Phase 1 portion of the suitable land base, which allows implementation of this project at this time.

As stated in the Forest Plan Amendment ROD - "Because this was an amendment of the 1997 Plan, much of the management direction of the 1997 Plan is carried forward relatively unchanged into the amended Forest Plan. Therefore, many existing projects and ongoing actions that were consistent with the 1997 Plan will continue to be so with the amended Forest Plan." Although some of the LUD allocations have changed with the Forest Plan Amendment ROD, the units and roads in this decision are still within development LUDs. The major Forest Plan LUD changes within the Baht project area involved changing some of the Scenic Viewshed LUD to the Modified Landscape LUD based on updated scenery inventory information.

The 2008 Forest Plan Amendment ROD also contains transition language for timber sale projects that were already being planned. This language identifies three different categories of projects, depending on how far along the projects are in the planning process. The Baht Timber Sale project is in Category 2, which requires me to review the project and incorporate the new direction in the 2008 Forest Plan to the extent this can be done without causing major disruptions in the implementation of the project.

Projects in Category 2 "are consistent with the goals and objectives of the amended Plan". The environmental effects of the Baht Timber Sale project have been disclosed to the public through site-specific project-level environmental documents. Projects in Category 2 were also assumed to be implemented to the extent that they were consistent with the alternative in the environmental analysis of the 2008 Forest Plan Amendment

Final EIS. “Because the Final EIS considered these projects in its effects analysis, their implementation is not in conflict with the amended Plan.”

The ROD for the 2008 Forest Plan directs me “to review these projects, and incorporate the new direction in the amended Forest Plan to the extent this can be done without causing major disruptions in the implementation of these projects.” Because the amount of work for these two units will be minimal, I am directing the Wrangell Ranger District to incorporate the legacy standard and guideline changes for this decision. The legacy standard and guideline applies in VCUs where more than 33 percent of the productive old growth forest in the VCU has been harvested from 1954 to 2005, or VCUs where less than 33 percent has been harvested but more than 67 percent of the productive old growth is projected to be harvested by the end of the Forest Plan planning horizon (these VCUs are identified in the 2008 Forest Plan). One of the VCUs (VCU 4570) is within the Baht Timber Sale project area and the required structure will be maintained as described in Appendix 1 (Unit Cards).

Another change in the Forest Plan involves the calculation of road density where human-caused wolf mortality has been determined to be the significant contributing factor to unsustainable wolf mortality. Although there has been no determination based on wolf harvest data for Zarembo Island, total road density was calculated and disclosed in the 2007 decision for the Baht Timber Sale project. This decision will not change that calculation.

The ROD for the 2008 Forest Plan Amendment also states that Category 2 timber sale projects do not require changes to the scenery management program. The 2008 Forest Plan and 1997 Forest Plan programs are essentially the same in their environmental effects. The change in LUD allocations to Modified Landscape would result in a determination of less effect to scenery since the standards for the Modified Landscape LUD are less restrictive than those for the Scenic Viewshed LUD. Therefore, scenery analysis was not reanalyzed for the Baht Timber Sale project.

I have determined that the changes made in this decision are not substantial when compared to the analysis in the Baht Timber Sale FEIS. The modifications to these two units do not substantially change the level of impact on any resource as analyzed in the project FEIS (see Tables R-1). Slightly more old-growth habitat will be retained within VCU 4570 than displayed in the Baht Final EIS due to the application of the legacy standard and guideline within VCU 4570 and the final layout of the units (See Appendix 1).

## Effects of this decision

The effects of the Selected Alternative including Units 3 and 17 were discussed in the Baht Timber Sale Record of decision signed in July 2007. A discussion that is focused on Units 3 and 17, and the associated roads follows:



### **Issue 1: Timber harvest in the project area may affect local and regional economies.**

The addition of these two units would provide approximately an additional 2.4 million board feet from the project area. A financial efficiency analysis of the Selected Alternative resulted in an indicated bid value of \$142.91/ MBF. This was determined by the appraisal method used for the Baht Timber Sale Final EIS. This method, NEAT (NEPA Economic Appraisal Tool), is based on Transaction Evidence Appraisal (TEA). The actual bid rate and value will be determined through the Residual Value (RV) at the time of the sale offer for these units. These two units would provide support for a potential annualized nine and thirteen jobs depending on whether some of volume is exported or shipped out-of state at the purchaser's request.

### **Issue 2: The cumulative watershed effects of past practices and additional timber harvest may adversely affect stream channels in the project area.**

This decision combined with 2007 decision would result in additional harvest and road construction in four sensitive watersheds in the Baht project area. Unit 3 is partially within the St. Johns Creek and partially within an unnamed coastal watershed. Unit 17 is mostly within the MacNamara Creek watershed and the rest is within 52012 Creek watershed. St. Johns Creek watershed and 52012 Creek watershed were identified as sensitive watersheds in the Baht Timber Sale Final EIS. The additional effects of these two units would be minimal.

### **Issue 3: Additional harvest in this area may affect deer winter range and increase fragmentation of desirable habitat.**

This decision would reduce the amount of the highest-value deer winter range (upper quartile of the deer model Habitat Suitability Index [HSI]) by approximately 38 acres. Results of the deer model indicate a deer habitat capacity for greater than 20 deer per square mile would exist after harvest (the same effects as the 2007 decision).

This decision would further reduce productive old growth from 30,270 acres to 30,130 acres. This action would fragment an already fragmented old-growth block (fragmented from natural and human causes). This decision would not affect the other two productive old-growth blocks.

### **Issue 4: Proposed activities occur in the Scenic Viewshed land use designation (LUD) of the project area, which already exceeds Forest Plan adopted Visual Quality Objectives (VQOs).**

This decision would not increase the effects to the scenery within the Scenic Viewshed LUD since both units are within the Timber Production LUD.

### **Issue 5: Portions of the public are concerned about entering inventoried roadless areas.**

The effects of this decision on inventoried roadless areas would be the same as the analysis displayed for Alternative 2 in the Final EIS. Harvest within these inventoried roadless areas is allowed at this time since they were included as part of Phase 1 of the Tongass Adaptive Management Strategy. The effects would include the harvest of approximately 34 acres in Unit 3 and construction of approximately 0.3 mile of temporary road in the East Zarembo Roadless Area. For the West Zarembo Roadless Area, the effects would include the clearcut harvest of approximately 40 acres in Unit 17



and no construction of roads in the West Zarembo Roadless Area. No unique characteristics as identified by the Roadless Rule would be affected. There will be no effect on the South Zarembo Roadless Area. A total estimated 166 acres would no longer have roadless characteristics due to roads and timber harvest and its influence to the area within 600 feet from roads and 1200 feet from units.

### **Other Environmental Consequences**

The effects of the Selected Alternative on air quality, heritage, invasive plants, recreation, minerals/geology, socioeconomics, soils, subsistence and wildlife habitat other than deer have been analyzed. They are the same or similar to Alternative 6. An analysis of the Selected Alternative, including the cumulative effects with other projects, is located in the project record.

## **Public Involvement**

Public involvement has been instrumental in the process of identifying issues and creating alternatives for this project, assisting me in making a more-informed decision for the Baht Timber Sale project. Public meetings, Federal Register notices, newspaper ads, government-to-government consultation, group and individual meetings, and the Tongass National Forest Schedule of Proposed Actions were used to solicit input for this project.

### **Notice of Intent (NOI)**

A Notice of Intent (NOI) was published November 10, 2003 in the *Federal Register* when it was decided that an EIS was to be completed for the project. A Revised NOI was published February 3, 2006 identifying a new Proposed Action.

A second Revised NOI was published May 15, 2006 to notify the public that this project would analyze entry into the inventoried roadless area. A legal notice announcing the NOI was published in the *Wrangell Sentinel* and the *Juneau Empire*.

### **Public Scoping**

In July 2003, a scoping letter was mailed to 147 individuals, organizations, agencies, and tribal governments. Comments were received from 13 agencies, individuals and organizations.

In February 2006, an updated scoping letter was sent to the scoping mailing list, identifying a new Proposed Action. Comments were received from 16 agencies, individuals and organizations. In addition, an open house was held at the Wrangell Ranger District to share information about the proposal.

In May 2006, another updated scoping letter was mailed to the public informing them that the proposed harvest would include analysis of entry into inventoried roadless areas. Comments were received from three individuals and organizations.

## **Draft EIS**

### **Availability of Draft EIS for Public Comment**

Availability of the Draft EIS was published November 3, 2006 in the *Federal Register* and through legal notices published November 5, 2006 in the *Juneau Empire* (the newspaper of record) and in the *Wrangell Sentinel* November 9, 2006. The Notice of Availability in the *Federal Register* initiated a 45-day public comment period. The Draft

EIS was mailed to Federal and State agencies, Native and municipal offices, and others who requested it.

### **Analysis and Incorporation of Public Comment on the Draft EIS**

Three agencies and three organizations submitted written comments on the Draft EIS. These comments helped the IDT further define the existing issues, identify any new issues, and consider any additional mitigations or options. Public comment and Forest Service response to the comments was included in Appendix B of the Final EIS. Concerns expressed in public comments are reflected in the issues identified and the alternatives developed for the project: economic timber sales, harvest in roadless areas, effects to scenery, wildlife habitat, and watersheds

### **Subsistence Hearing**

Following publication of the Draft EIS, a subsistence hearing was held in Wrangell on May 16, 2007. No members of the public attended the hearing. One written comment was received and included with a transcript of the testimony (Appendix C of the Final EIS.)

### **Final EIS and Record of Decision - 2007**

The Notice of Availability of the Final EIS was published in the *Federal Register* (9/14/2007) and through legal notices published in the *Juneau Empire* (9/14/2007), the newspaper of record at that time, and in the *Wrangell Sentinel* (9/20/2007). The Baht Timber Sale Record of Decision, signed on July 25, 2007, included only the roaded portion of the Selected Alternative due to the Settlement Agreement. The legal notice published in the newspaper of record initiated a 45-day appeal period (36 CFR 215). No timely appeals were received.

Copies of the ROD and the Final EIS were mailed to Federal and State agencies, tribal governments, municipal offices, and to those who requested them or responded to the Draft EIS. The Final EIS and ROD were also available for review at the Wrangell Ranger District Office.

### **Record of Decision II**

The legal notice for this Record of Decision will be published in the current newspaper of record, *Ketchikan Daily News*, in Ketchikan, Alaska. The legal notice published in the newspaper of record will initiate the 45-day appeal period (36 CFR 215). Also as a courtesy, a notice will be published in the *Juneau Empire* in Juneau, Alaska.

## **Coordination with Other Agencies**

The Final EIS identifies the agencies that were informed of and/or involved in the planning process (see Distribution List in Chapter 4).

A biological assessment was prepared and sent to the U.S. Fish and Wildlife Service (USFWS) and to the National Marine Fisheries Service (NMFS) as part of the Section 7 consultation under the Endangered Species Act. USFWS and NMFS concurred with the findings of “not likely to adversely affect” the federally listed species. The National Marine Fisheries Services was also consulted for Essential Fish Habitat (EFH) in accordance to the Memorandum of Understanding (MOU).

The Alaska Coastal Management Plan (ACMP) consistency review process was initiated upon publication of the Draft EIS through the Alaska Department of Natural Resources, Office of Project Management and Permitting.

The State Historic Preservation Officer has been consulted, in accordance with Section 106 of the NHPA and 36 CFR Part 800. The Forest Service has satisfied the consultation process with the State Historic Preservation Officer. Native communities have been contacted and public comment encouraged. No effects on known heritage resources are anticipated.

An interagency team of biologists representing the USFWS, Alaska Department of Fish and Game (ADF&G), and the Forest Service reviewed small old-growth reserves (OGRs) for location and function during the project analyses. The Baht Timber Sale Record of Decision (2007) included an amendment to the Forest Plan for the OGR design for VCU 4560. This design was incorporated with the LUD allocations for the Forest Plan Amendment with minor changes made during the interagency biologists' review of the conservation strategy for the Forest Plan Amendment.

## Consultation with Tribal Governments

The following federally recognized tribal governments and organizations were consulted about this project:

- Wrangell Cooperative Association
- Central Council of the Tlingit and Haida Indian Tribes of Alaska
- Sealaska Corporation

Tribal concerns were considered in the environmental analysis. Tribal consultation does not imply that the tribes endorse the proposed action or any of the alternatives.

## Alternatives Considered in the Baht Timber Sale Final EIS

Six alternatives were considered in detail in the Final EIS. Each action alternative is consistent with the Forest Plan and the effects are described in Chapters 2 and 3 of the Final EIS. Refer to Table 2-1 and 2-2 in the Baht Timber Sale Final EIS for a comparison of the effects of the alternatives.

**Alternative 1:** The Final EIS included an analysis of the No Action Alternative as required by the Council on Environmental Quality (CEQ) regulations (40 CFR 1502.14(d)). This alternative represented the existing condition.

**Alternative 2** responded to Issue 4, scenery concerns, by locating all timber harvest units within the Timber Production LUD instead of the Scenic Viewshed LUD.

**Alternative 3** responded to Issue 1 by maximizing the amount of timber harvested.

**Alternative 4** responded to Issue 2, cumulative watershed effects, by dispersing harvest throughout the project area and minimizing harvest in watersheds with higher sediment risk assessments.

**Alternative 5** responded to Issue 3, deer habitat, by reducing the size of created openings and using uneven-aged and two-aged management.

**Alternative 6** responded to Issue 5, Roadless Areas, by avoiding all timber harvest and roads within the inventoried roadless areas. The Selected Alternative was a modification of this alternative and described in the Baht Timber Sale Record of Decision (July 2007).

## Alternatives Considered in this Decision

Two alternatives were considered in this Baht ROD II decision. Both are consistent with the Forest Plan and the effects are described in Chapters 2 and 3 of the Final EIS.

**Alternative 1** - No Action, (no harvest of Units 3 and 17)

**Alternative 2** - Harvest of Units 3 and 17 and construction of associated temporary road.

### Environmentally Preferred Alternative

Alternative 1, the No-action Alternative, would result in no environmental disturbance and is therefore the environmentally preferred alternative.

## Mitigations

The analysis documented in the Baht Timber Sale EIS discloses the possible adverse effects of implementing the actions proposed under each alternative. Measures were formulated to mitigate or reduce these effects, when needed. These measures were applied in the development of the project alternatives and in the design of the harvest units and road corridors. The Mitigation Measures section of Chapter 2 of the Baht Final EIS, and Appendix 1 (Unit Cards) of this Record of Decision discuss mitigation measures for all alternatives.

## Monitoring

Implementation monitoring will determine how well specific design features or mitigation measures work to protect natural resources. Road use during and following harvest will be monitored to determine whether closure features are sufficient to preclude motorized access. Harvest units will be monitored 3 years after harvest to determine if regeneration is successful.



## Findings

**Findings Required By Law****Alaska National Interest Lands Conservation Act (ANILCA) of 1980; Section 810**

Subsistence Evaluation and Findings: A subsistence evaluation was conducted for the six alternatives, in accordance with Alaska National Interest Lands Conservation Act (ANILCA) Section 810. An ANILCA 810 subsistence hearing was conducted during the comment period for the Draft EIS. The hearing transcript was published as Appendix C of the Final EIS.

This evaluation indicates that the potential foreseeable effects from the Selected Alternative will not have a significant possibility of a significant restriction of subsistence uses for deer, bear, furbearers, marine mammals, waterfowl, salmon, other finfish, shellfish, and other foods such as berries and roots (see Chapter 3, Subsistence section, in the Baht Timber Sale Final EIS).

**Bald Eagle Protection Act**

This decision will comply with the Bald Eagle Protection Act. No eagle nests have been found within or adjacent to these two units. Protective measures are not required for this project at this time.

**Clean Air Act of 1970 (as amended)**

Emissions from the implementation of the Selected Alternative will be of short duration and are not expected to exceed State of Alaska ambient air quality standards (18 AAC 50).

**Clean Water Act (1977, as amended)**

Project activities meet all applicable State of Alaska Water Quality Standards. Congress intended the Clean Water Act of 1972 (Public Law 92-500) as amended in 1977 (Public Law 95-217) and 1987 (Public Law 100-4) to protect and improve the quality of water resources and maintain their beneficial uses. Section 313 of the Clean Water Act and Executive Order 12088 of January 23, 1987 addresses Federal agency compliance and consistency with water pollution control mandates. Agencies must be consistent with requirements that apply to "any governmental entity" or private person. Compliance is to be in line with "all Federal, State, interstate, and local requirements, administrative authority, and process and sanctions respecting the control and abatement of water pollution."

The Clean Water Act (Sections 208 and 319) recognized the need for control strategies for nonpoint source pollution. The National Nonpoint Source Policy (December 12, 1984), the Forest Service Nonpoint Strategy (January 29, 1985), and the USDA Nonpoint Source Water Quality Policy (December 5, 1986) provide a protection and improvement emphasis for soil and water resources and water-related beneficial uses. Soil and water conservation practices (BMPs) are recognized as the primary control mechanisms for nonpoint source pollution on National Forest System lands. The EPA supports this perspective in their guidance, "Nonpoint Source Controls and Water Quality Standards" (August 19, 1987).

The Forest Service must apply BMPs that are consistent with the Alaska Forest Resources and Practices Act (AFRPA) to achieve Alaska Water Quality Standards. The site-specific application of BMPs, with a monitoring and feedback mechanism, is the approved strategy for controlling nonpoint source pollution as defined by Alaska's Nonpoint Source Pollution Control Strategy (2007). In 1997, the State approved the BMPs in the Forest Service Soil and Water Conservation Handbook (FSH 2509.22, October 1996) as consistent with AFRPA. This handbook is incorporated into the Forest Plan.

A discharge of dredge or fill material from normal silvicultural activities such as harvesting for the production of forest products is exempt from Section 404 permitting requirements in waters of the United States, including wetlands (404(f)(1)(A)). Forest roads qualify for this exemption only if they are constructed and maintained in accordance with BMPs to assure that flow and circulation patterns and chemical and biological characteristics of the waters are not impaired (404(f)(1)(E)). The BMPs that must be followed are specified in 33 CFR 323.4(a). These specific BMPs are incorporated into the Soil and Water Conservation Handbook under BMP 12.5.

The design of harvest units for the Selected Alternative will follow the standards, guidelines and direction in the Forest Plan and applicable Forest Service Manuals and Handbooks. The unit cards (ROD Appendix 1) contains specific details on practices prescribed to prevent or reduce nonpoint sediment sources.

### **Coastal Zone Management Act (CZMA) of 1972 (as amended)**

The Coastal Zone Management Act of 1972, as amended, while specifically excluding Federal lands from the coastal zone, requires that Federal agency activities be consistent with the enforceable policies of the State coastal management program to the maximum extent practicable when the activities affect the coastal zone. The Forest Service made a determination that the Baht Timber Sale project will affect the coastal zone, and will be carried out in a manner that is consistent to the maximum extent practicable with the enforceable policies of the Alaska Coastal Management Program. The Office of Project Management and Permitting, now the Division of Ocean and Coastal Management, of the Alaska Department of Natural Resources reviewed and concurred with that determination (December 11, 2006).

### **Endangered Species Act (ESA) of 1973 (as amended)**

The Selected Alternative is not likely to adversely affect any threatened or endangered species in or outside the project area. Consultations with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service have been conducted, and these agencies have concurred that the proposed project is not likely to affect any threatened or endangered species. A complete biological assessment is included in the project record.

### **Federal Cave Resource Protection Act of 1988**

No cave resources have been documented in the project area and no caves were discovered during fieldwork done for this analysis.

### **Forest Service Transportation Final Administrative Policy (Roads Rule)**

The Baht Timber Sale Final EIS and this ROD are prepared to be consistent with the Forest Service Transportation Final Administrative Policy and the Tongass National

Forest Level Road Analysis (January 2003), the Zarembo Island Roads Analysis (July 2005) and the decision on the Wrangell Ranger District Access Travel Management environmental analysis (August 2007). The Baht Timber Sale Record of Decision (July 2007) included the determination that the Baht road system is "the minimum road system needed for safe and efficient travel and for administration, utilization, and protection of National Forest System lands" (36 CFR 212.5). This determination is not affected by this decision since the roads in this decision will be decommissioned after timber sale activities are complete.

### **Magnuson-Stevens Fishery Conservation and Management Act**

The potential effects of the project on Essential Fish Habitat (EFH) are discussed in Chapter 3 of the Baht Timber Sale Final EIS. This discussion includes reference to the Magnuson-Stevens Fisheries Conservation Act that requires the Forest Service to consult with the National Marine Fisheries Service on projects that may affect EFH. It also includes a description of the EFH in the project area, a description of the proposed activities, and a description of the mitigation measures that will be protect these essential habitats.

According to the agreement between the Forest Service and the National Marine Fisheries Service on the method to complete EFH consultation using National Environmental Policy Act Procedures (August 2000), the Baht Timber Sale Draft EIS (October 2006) was provided to the National Marine Fisheries Service to formally initiate the consultation process. NMFS concurred with the findings that the Baht Timber Sale may adversely affect EFH because of cumulative effects of past harvest and submitted recommendations. These factors were considered in evaluating the potential effects of the Selected Alternative on EFH.

1. Forest Plan Standards and Guidelines for process group riparian buffers are applied in all instances on Class I, II, and III streams.
2. BMPs described in the unit and road cards provide assurance of water quality and aquatic habitat protection for all freshwater streams and marine waters affected by the project.
3. All acres of slopes greater than 72 percent proposed for harvest have been field reviewed by professional soil scientists who determined harvest of these slopes could be accomplished with no damage to other resources.
4. Recent maintenance on roads and facilities has improved sediment control near the Deep Bay and Roosevelt Harbors.
5. Correction of pipes that impede fish passage has occurred and will continue to occur as funding is available.

### **Marine Mammal Protection Act of 1972**

Actions authorized in the Selected Alternative will not have a direct, indirect, or cumulative effect on marine mammals. Marine mammal viewing guidelines administered by the National Marine Fisheries Service (NMFS) and enforced by the Coast Guard are sufficient for their protection. NMFS administers the Marine Mammal Protection Act (MMPA), which prohibits the "take" of all marine mammal species in U.S. waters.



“Take” is defined as “to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal.” Harassment is defined in the MMPA as “any act of pursuit, torment, or annoyance which has the potential to injure a marine mammal or marine mammal stock in the wild; or has the potential to disturb a marine mammal stock in the wild by causing disruption of behavior patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering.”

### **National Forest Management Act (NFMA) of 1976**

The National Forest Management Act (NFMA) requires specific determinations in the Record of Decision: consistency with existing Forest Plans and FSM 2410.3, R10 Supp. 2400-2002-1 (5/7/2002), a determination of clearcutting as the optimal method of harvesting, if used, and specific authorizations to create openings over 100 acres in size. Information and rationale used to develop unit prescriptions is shown on unit cards (Appendix 1 of the ROD), in Chapter 3 of the Final EIS, and in the project record.

#### Clearcutting as the Optimal Method of Harvesting

The Forest Plan provides guidance on when to use even-aged management. Clearcutting (an even-aged method) is used in this project to preclude or minimize the occurrence of potentially adverse impacts from windthrow. It is applied where windthrow potential is moderate to high. Clearcutting is also used to minimize mistletoe infestations, logging damage or other factors affecting forest health. Specific information and rationale for use of this prescription is shown in the silvicultural prescriptions (which are a part of the project record), in the introduction to the unit cards and in the individual unit cards (ROD Appendix 1), and in Chapter 3 of the Baht Timber Sale Final EIS. Where used, this prescription has been deemed optimal related to site-specific considerations as described above.

#### Harvest Openings Over 100 Acres in Size

The Baht Timber Sale project complies with all resource integration and management requirements of 36 CFR 219 (219.14 through 219.27), through application of Forest Plan Standards and Guidelines at the project level. No openings in excess of 100 acres are planned. Specific NFMA findings pertaining to silvicultural systems are included in Chapter 3 of the Baht Timber Sale Final EIS and the project record.

### **National Historic Preservation Act (NHPA) of 1966 (as amended)**

I have determined that there will be no effects on historic properties listed in or eligible for listing in the National Register of Historic Places. Heritage resource surveys of various intensities were conducted in the analysis area in accordance with the Regional Inventory Strategy. By following the provisions of the Programmatic Agreement signed July 29, 2002 between the Forest Service, Alaska State Historic Preservation Officer, and the Advisory Council on Historic Preservation, this action complies with Section 106 of the National Historic Preservation Act.

### **Tongass Timber Reform Act (TTRA) of 1990**

Forest Plan Riparian Standards and Guidelines apply to the Selected Alternative and no commercial timber harvest will occur within 100 feet of any Class I stream or any Class II stream flowing directly into a Class I stream, as required in Section 103 of the TTRA. The design and implementation direction for the Selected Alternative incorporates best



management practices (BMPs) and Forest Plan Standards and Guidelines for the protection of all stream classes.

### Executive Orders

#### **Executive Order 11988 (Floodplains)**

Executive Order 11988 directs Federal agencies to take action to avoid, to the extent possible, the long- and short-term adverse effects associated with the occupancy and modification of floodplains. The project design and the application of BMPs and Forest Plan Riparian Standards and Guidelines combine to avoid effects on floodplains.

#### **Executive Order 11990 (Wetlands)**

Executive Order 11990 requires Federal agencies to avoid, to the extent possible, the long- and short-term adverse effects associated with the destruction or modification of wetlands. Techniques and practices required by the Forest Service serve to maintain the wetland attributes including values and functions. No wetlands will be affected by these project activities.

#### **Executive Order 12898 (Environmental Justice)**

Executive Order 12898 directs Federal agencies to state clearly in the EIS whether a disproportionately high and adverse human health or environmental impact on minority populations, low-income populations, or Indian tribes is likely to result from the proposed action and any alternatives. The Executive Order specifically directs agencies to consider patterns of subsistence hunting and fishing when an agency action may affect fish or wildlife. The issue of environmental justice has been addressed in the Subsistence section in Chapter 3 of the Baht Timber Sale Final EIS. Environmental justice was not identified as an issue for the project because: 1) No communities were identified as being adversely affected in this area. 2) None of the alternatives would have a disproportionately high and adverse effect on the health of the environment of the minority or low-income populations that use the Baht Timber Sale area.

#### **Executive Order 12962 (Aquatic Systems, Recreational Fisheries)**

Executive Order 12962 requires Federal agencies to evaluate the effects of proposed activities on aquatic systems and recreational fisheries. The Selected Alternative minimizes the effects on aquatic systems through project design, application of standards and guidelines, BMPs, and site-specific mitigation measures. In the Selected Alternative, recreational fishing opportunities would remain essentially the same because aquatic habitats are protected through implementation of BMPs and riparian buffers.

#### **Executive Order 13007 (Indian Sacred Sites)**

Executive Order 13007, Indian Sacred Sites, provides presidential direction to Federal agencies to give consideration to the protection of American Indian sacred sites and allow access where feasible. In a government-to-government relationship, the tribal government is responsible for notifying the agency of the existence of a sacred site. A sacred site is defined as a site that has sacred significance due to established religious beliefs or ceremonial uses, and which has a specific, discrete, and delineated location that has been identified by the tribe. Tribal governments or their authorized representatives have not identified any specific sacred site locations in the project area.

### **Executive Order 13175 (Consultation and Coordination with Indian Tribal Governments)**

Executive Order 13175 directs Federal agencies to respect tribal self-government, sovereignty, and tribal rights, and to engage in regular and meaningful government-to-government consultation with tribes on proposed actions with tribal implications. The Forest Service consulted with the local tribe during the planning stages of the project as previously noted in Consultation with Tribal Governments and Agencies.

### **Executive Order 13186 (Migratory Birds)**

The Migratory Bird Treaty Act of 1918 (amended in 1936 and 1972) prohibits the taking of migratory birds, unless authorized by the Secretary of Interior. The law provides the primary mechanism to regulate waterfowl hunting seasons and bag limits, but its scope is not just limited to waterfowl. Over 100 species of birds migrate from other states and countries to Alaska to breed, nest, and fledge their young. Most of these birds fly to interior or northern Alaska and only pass through the project area on the way to their breeding grounds. The migratory species that may stay in the area utilize most, if not all, of the habitats described in the analysis for breeding, nesting, and raising their young. The effects on these habitats were analyzed for this project.

The Selected Alternative will not have a significant direct, indirect, or cumulative effect on any migratory bird species for this project area. There may be direct minor effects on individuals or small groups and their nests from the harvest of timber or the disturbance caused by harvest activities.

## **Implementation Process**

Implementation of this decision may occur no sooner than 50 days following publication of the legal notice of the decision in the *Ketchikan Daily News*, published in Ketchikan, Alaska.

Timber harvest activities in the project area will take place on lands found suitable for timber production under provisions of the National Forest Management Act. The timber may be offered in one or more sales.

This project will be implemented in accordance with Forest Service Manual (FSM) and Forest Service Handbook (FSH) direction for Timber Sale Project Implementation in FSM 2430 and FSH 2409.18. This direction provides a bridge between project planning and implementation and will ensure execution of the actions, environmental standards, and mitigations approved by this decision, and compliance with the TTRA and other laws. All applicable best management practices (BMPs) will be applied to the Selected Alternative.

Implementation of all activities authorized by this Record of Decision will be monitored to ensure that they are carried out as planned and described in the Final EIS.

Appendix 1 to this Record of Decision contains the unit cards. These cards are an integral part of this decision because they document the specific resource concerns, management objectives, and mitigation measures to govern the layout of the harvest units

and construction of roads. These cards will be used during the implementation process to assure that all aspects of the project are implemented within applicable standards and guidelines and that resource effects will not be greater than those described in the Baht Timber Sale Final EIS. Similar cards will document any changes to the planned layout, which may occur during implementation.

The implementation record for this project will display:

- Each harvest unit, transportation facility, and other project components as actually implemented,
- Any proposed changes to the design, location, standards and guidelines, or other mitigation measures for the project, and
- Authorization of the proposed changes.

## Process for Change during Implementation

Proposed changes to the authorized project actions will be subject to the requirements of the National Environmental Policy Act (NEPA), the National Forest Management Act of 1976, the Alaska National Interest Lands Conservation Act, the Tongass Timber Reform Act, the Coastal Zone Management Act, and other laws concerning such changes.

In determining whether and what kind of NEPA action is required for changes during implementation, the Forest Supervisor will consider the criteria in the Code of Federal Regulations (40 CFR 1502.9(c)), and Forest Service Handbook (FSH) 1909.15, sec. 18 to determine whether to supplement an existing environmental impact statement. The Forest Supervisor will determine whether the proposed change is a substantial change to the Selected Alternative as planned and already approved, and whether the change is relevant to environmental concerns. Connected or interrelated changes to particular areas or specific activities and cumulative effects will be considered together in making this determination.

Minor changes are expected during implementation to better meet on-site resource management and protection objectives. Minor adjustments to unit boundaries are also likely during final layout for the purpose of improving logging system efficiency. This will usually entail adjusting the boundary to coincide with logical logging setting boundaries. Changes made during implementation will be reviewed, documented, and approved by the Responsible Official.

## Right to Appeal

This decision is subject to administrative review (appeal) pursuant to Title 36 Code of Federal Regulations (CFR) Part 215. Individuals or organizations who submitted comments during the comment period specified at CFR 215.6 may appeal this decision. The notice of appeal must be in writing, meet the appeal content requirements at CFR 215.14 and be filed with the Appeal Deciding Officer:

Denny Bschor, Regional Forester  
Alaska Region  
US Department of Agriculture  
709 W. 9th Street  
P.O. Box 21628  
Juneau, AK 99802-1628

Email address: [appeals-alaska-regional-office@fs.fed.us](mailto:appeals-alaska-regional-office@fs.fed.us)  
Fax (907) 586-7840

The Notice of Appeal, including attachments, must be filed (regular mail, fax, e-mail express delivery or messenger service) with the Appeal Deciding Officer at the correct location within 45 calendar days of the date that the legal notification of this decision is published in the *Ketchikan Daily News*, the official newspaper of record. The publication date in the newspaper of record is the exclusive means for calculating the time to file an appeal. Those wishing to appeal this decision should not rely upon dates or timeframe information provided by any other source.

Hand-delivered appeals will be accepted at the Regional Office during normal business hours (8:00 am through 4:30 pm) Monday through Friday, excluding holidays.

Implementation of decisions subject to appeal pursuant to 36 CFR Part 215, may occur on, but not before, five business days from the close of the appeal filing period, if no appeals are received.

For additional information concerning this decision, contact Mark Hummel, District Ranger, Wrangell Ranger District, P.O. Box 51, Wrangell, AK 99929, or call (907) 874-7595.



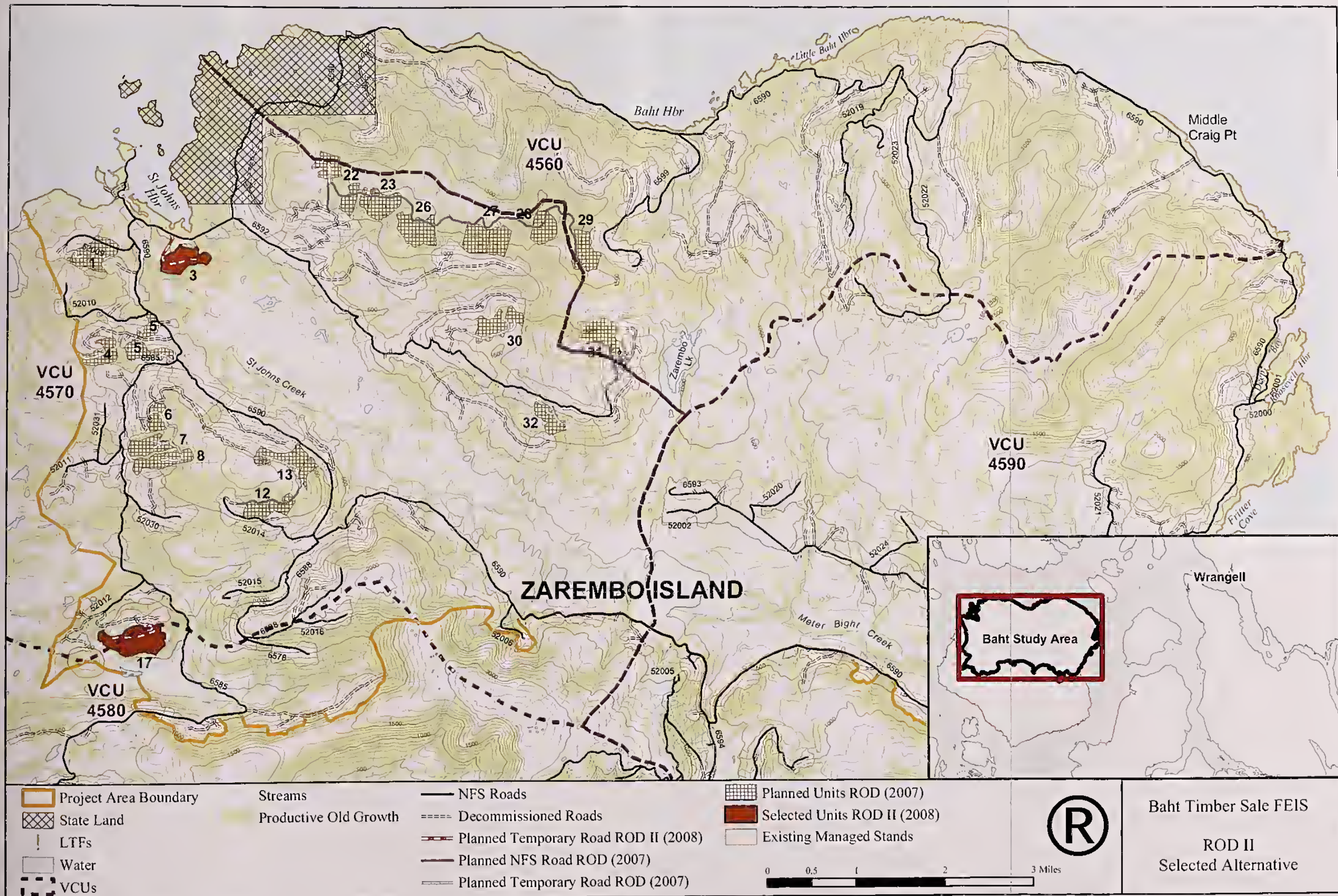
FORREST COLE

Forest Supervisor



Date









# Appendix 1

## Unit Cards

Appendix 1, Unit Cards, is used to explain site-specific information about each unit and any resource concerns and mitigations. Narrative cards and maps for each unit in this Record of Decision are in numerical order and describe the silvicultural prescription, resource concerns, and protection or mitigation measures for each unit.

The section of this introduction, Harvest Treatments, explains the stand description and harvest treatments for this entry. The next section, Resource Concerns and Responses, summarizes how protection measures can be used for resource concerns. These protection measures can be either from the Forest Plan or project-specific.

### Unit Card Header Information

Each unit card narrative has a header block with information used to describe in general the stand's size, location, and volume proposed for harvest. Each header block contains the following information:

**Unit Number:** This is the number assigned to the unit block during the Logging Systems and Transportation Analysis development.

**Unit Acres:** This is an estimate of total planned acres within the unit using aerial photos, GIS information and preliminary field reconnaissance. Modifications were made during the environmental analysis to the original LSTA unit boundary.

**Traversed Acres:** This is the number of acres of the unit as identified on the ground during intensive field reconnaissance which included measurement of the proposed harvest boundary.

**Estimated Net Timber Volume:** This is the estimated usable volume in board feet within the unit. This was derived from a cruise done in 2007.

**Volume Strata Acres:** This is the approximate number of unit acres by volume strata as explained in the Baht Timber Sale Final EIS Chapter 3 Silviculture section.

**Existing Stand Condition:** This is the developmental stage of the physical and temporal distribution of trees and other plants in a forested area.

**Silvicultural Prescription:** This provides detailed direction about the methods, techniques, timing, and monitoring of vegetative treatments.

## **Silvicultural Systems**

### **Harvest Treatments**

Silvicultural systems refer to a complete set of treatments used to manage forest stands and forest landscapes over long periods of time. This process includes the harvest or regeneration of the stand, intermediate cuttings, and other treatments necessary for the development and replacement of the forest stand.

Silvicultural systems are applied through prescriptions, the written records of the examination, diagnosis, and treatment regimes prescribed for the stand.

A silvicultural diagnosis/prescription has been written for each unit. These provide guidance for treatments following this proposed timber harvest, including regeneration and thinning through the entire rotation.

Silvicultural prescriptions include these unit cards plus the sale layout and marking guidelines that will be completed for each of the timber harvest units. Minor changes are expected during implementation to better meet on-site resource management and protection objectives. Minor adjustments to unit boundaries are also likely during final layout for the purpose of improving logging system efficiency or for site conditions.

These cards will be used during the implementation process to assure that all aspects of the project are implemented within applicable standards and guidelines. If needed, during sale implementation, an interdisciplinary team will discuss any changes. Subsequent analysis and supplements to the EIS may be needed, as determined by the Responsible Official. Similar cards will be used to document any changes to the planned layout as the actual layout and harvest of the units occur with project implementation.

#### **Even-aged Management (Clearcut)**

All merchantable trees will be harvested. The objectives of this system are to create a fast-growing stand of trees to maximize wood fiber production, favorable timber sale harvest economics and logging feasibility. These stands would regenerate into a mostly single-aged stand. Where this treatment is recommended, it has been determined that it is optimum for the site and the created openings would not exceed 100 acres, to be in compliance with the National Forest Management Act. The harvest action chosen to achieve this treatment is clearcutting. Even-aged management will result in the conversion of mature stands to faster-growing stands of a single age. The post-harvest conditions of the forest stand for all systems will be dependent upon the existing plant community, the retained canopy structure, and advanced regeneration.



## **Resource Concerns and Responses**

### **Wildlife - Legacy Standard and Guideline**

This standard and guideline was incorporated with the decision on the Forest Plan Amendment (January 2008). The intent of the legacy standard and guideline is to ensure that sufficient legacy forest structure is maintained indefinitely within the Value Comparison Unit (VCU) to provide the matrix functions of the conservation strategy. Legacy forest structure shall be representative of the existing old-growth stand within the unit, including age, size class, species composition, and structural components. The Baht Project Area is partially within VCU 4570, which is one of the VCUs identified to have legacy forest structure left within 30% of the area of the original LSTA unit boundary. The number of acres to be retained are based on the original LSTA unit boundary prior to field verification and listed on each unit card. Information about how the areas retained for legacy structure were identified and maps showing these areas are in the project record

### **Riparian Management Areas**

Forest Plan Standards and Guidelines and BMP 12.6 direct the design of riparian management areas (RMAs) associated with each stream in the project area. The standards and guidelines prohibit programmed commercial timber harvest in RMAs associated with all Class I, Class II, and Class III streams, except for right-of-way clearing for road construction. RMAs vary in width from the edge of the stream channel according to process group (Table A1-1) and stream value class (Table A1-2).

Unit card maps show the location of all streams and the associated RMAs. RMA widths are described in the unit card narratives. Unit card narratives also prescribe the location and width of reasonable assurance of windfirmness (RAW) buffers for protecting RMAs, except where windthrow potential is low (BMP 12.6a).

### **Best Management Practices**

Best management practices are fully described in FSH 2509.22. Many are translated into timber harvest and road contract provisions to ensure implementation during contract inspection. Other best management practices are used after the contract is completed to ensure resource protection.

Log yarding practices are based on slope stability, soil disturbance, stream class. Additional measures are taken to protect streams from possible disturbance associated with tree falling and yarding according to BMP 13.16. Timber contract provisions guide tree falling and yarding near stream courses. Trees near Class IV streams are felled away from the stream whenever feasible and logging debris introduced into Class IV streams is removed. Suspension requirements are used to minimize soil erosion, mass movement, and formation of new channels (BMP 13.9)

## Process Groups and Stream Classes

Temporary roads and associated erosion control, including decommissioning practices, are subject to timber sale contract provisions (BMP 13.14, 13.16, 14.7, 14.18).

The Tongass National Forest defines stream channel types according to the Channel Type User Guide (USDA Forest Service, 1992), the foundation upon which aquatic habitat management prescriptions are developed. Table A1-1 shows the Forest Plan codes used on the unit card narratives. Only the channel types found in timber harvest units are listed.

Stream classes are also used to define appropriate RMAs and protection measures. Stream classes are defined in Table A1-2.

**Table A1-1**  
**Channel Types In or Adjacent to Proposed Harvest Units**

Process Group	Channel Type Code	Channel Type Description
Floodplain	FP3	Narrow Low Gradient Flood Plain Channel
	FP4	Low Gradient Flood Plain Channel
High Gradient Contained	HC1	Shallowly Incised Muskeg Channel
	HC2	Shallowly to Moderately Incised Footslope Channel
	HC3	Deeply Incised Upper Valley Channel
	HC5	Shallowly Incised Very High Gradient Channel
	HC6	Deeply Incised Mountain Slope Channel
Moderate Gradient/Mixed Control	MM1	Narrow Mixed Control Channel
	MM2	Moderate Width Mixed Control Channel

Table A1-2  
Stream Value Classes

Stream Value Class	Criteria
Class I	Streams and lakes with anadromous or adfluvial fish or fish habitat; or high quality resident fish waters, or habitat above fish migration barriers known to be reasonable enhancement opportunities for anadromous fish.
Class II	Streams and lakes with resident fish or fish habitat and generally steep (6-25 percent or higher) gradient (can also include streams with a 0-6 percent gradient) where no anadromous fish occur, and otherwise not meeting Class I criteria.
Class III	Streams are perennial and intermittent streams that have no fish populations or fish habitat, but have sufficient flow or sediment and debris transport to directly influence downstream water quality or fish habitat capability. For streams less than 30 percent gradient, special care is needed to determine if resident fish are present.
Class IV	Other intermittent, ephemeral, and small perennial channels with insufficient flow or sediment transport capabilities to have immediate influence on downstream water quality or fish habitat capability. Class IV streams do not have the characteristics of Class I, II, or III streams and have a bankfull width of at least 0.3 meter (1 foot).

## Heritage Resources

All identified heritage resources are not in the vicinity of the timber harvest units and temporary roads. If any sites are discovered during implementation, the Forest Service will fulfill its consultation requirements as described in Chapter 3 of the Baht Timber Sale Final EIS.

## Acronyms Used in the Unit Cards

PCT: Precommercial thinning

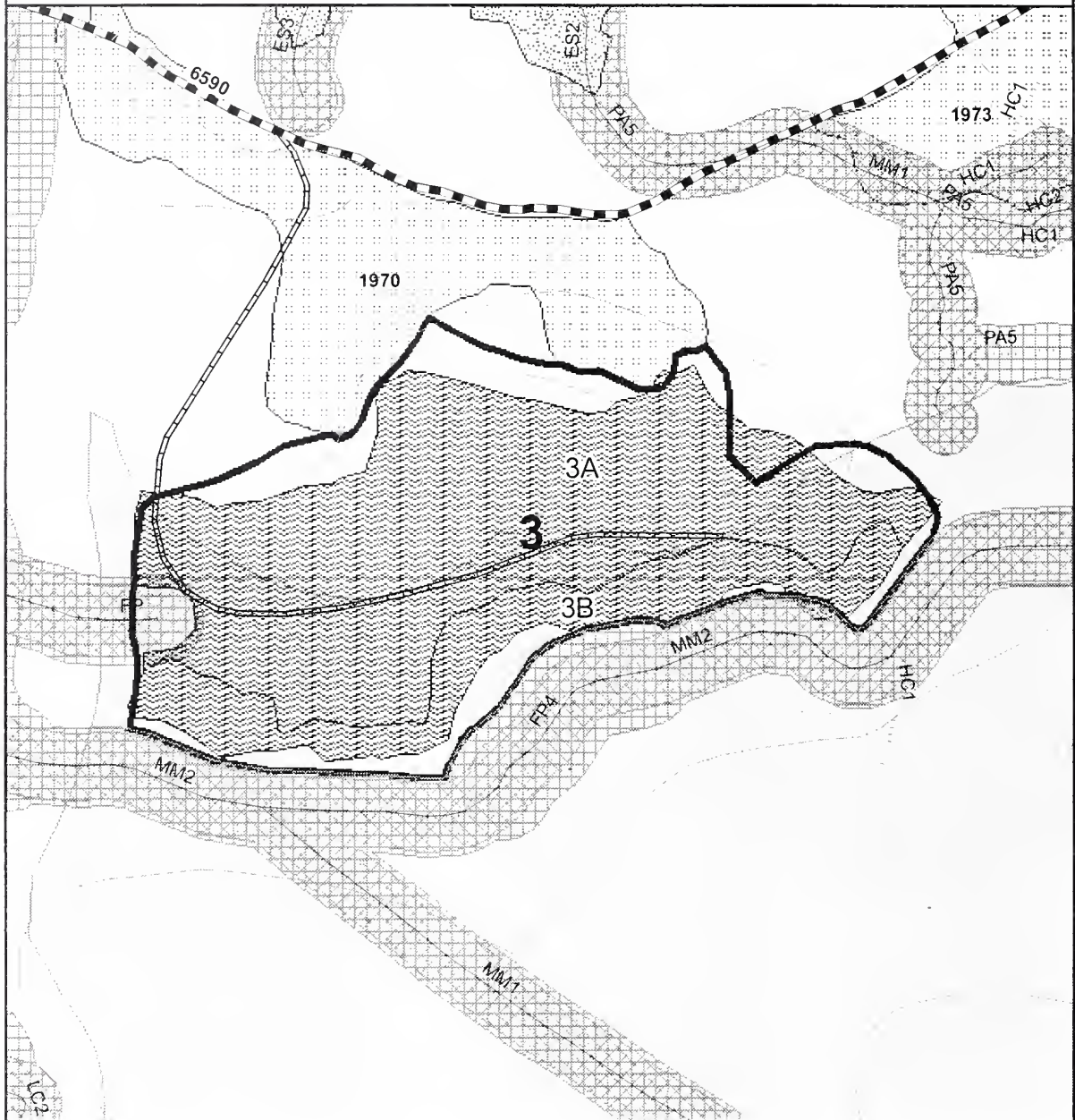
TPA: Trees per acre

BA: Basal Area. The cross-sectional area of a tree trunk measured in square inches, usually at the DBH. On the unit cards, this measurement is in square feet per acre.

DBH: Diameter breast height. The width of a plant stem (for instance, tree trunk) as measured at 4.5 feet above the ground surface.

# Baht Timber Sale ROD II

Unit 3



- 2008 ROD Unit
- Traversed Unit
- Inventoried Roadless Area
- Riparian Management Area
- TTRA Buffers

- NFS Road
- Decommissioned Road
- Proposed Temporary Road
- Lakes and Saltwater
- Existing Managed Stands

## Stream Class

- I
- II
- III
- IV

0 500 1,000 Feet



Last updated: May 23, 2008



## Unit Data Card – Baht Timber Sale Record of Decision II

<b>Volume Strata Acres:</b> <div style="margin-left: 40px;"> <b>High:</b> 24  <b>Medium:</b> 37  <b>Low:</b> 3         </div>	<b>Unit Acres:</b> 64 <b>Traversed Acres:</b> 53	<b>Unit Number:</b> 3 <b>Estimated</b> 886 <b>Net Volume/unit:</b> MBF
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**Unit Development and Stand Description:**  
 Even-aged stand structure dominated by western hemlock approximately 200 years old. Some older relic western redcedar survived from the previous disturbance and represent the largest trees in the stand. Alaska yellow-cedar and younger hemlock and spruce make up the midstory. The stand is fully stocked with 263 TPA (139 TPA > 9" DBH) and 267 sq. ft. BA/acre. Species composition is approximately 12% Sitka spruce, 78% western hemlock, 7% western redcedar, and 3% Alaska yellow-cedar. Net-volume growth is static or declining due to a high level of dwarf mistletoe infection, decay, and mortality. The risk of windthrow is moderate for this stand. Even-aged systems are appropriate regeneration methods.

**Stand Management Objectives:**  
 Contribute to even-flow sustained yield of timber resources and create stand of healthy vigorously growing trees with a diverse species mix as directed for the TM LUD in the Forest Plan. Regenerate the stand using clearcut with reserve trees present and natural regeneration. A reasonable assurance for windfirmness (RAW) buffer will be located approximately 130 feet beyond the RMA buffer with the objective of creating windfirmness. Within the RAW buffer, wind-resistant trees will be selected for retention via marking during layout. Larger windthrow-prone trees will be targeted for removal, particularly spruce and hemlock. Lay out unit to windfirm boundaries and monitor unit for windthrow. Promptly salvage significant windthrow when economical and feasible. No salvage will occur in RMAs. Avoid damage to regeneration with salvage operations. Evaluate stand for PCT in year-15 for possible treatment in year-20. Favor cedars and spruce in PCT operations.

**Fisheries and Water Quality:**  
**Concern:** A Class I stream is near the south unit boundary. This stream reach is a combination of Moderate Mixed Control (MM) and Flood Plain (FP) channels.  
**Mitigation:** No commercial timber harvest is within 100 feet of this Class I stream as identified in the field. No commercial timber harvest that counts towards the ASQ is allowed within the riparian management area (greatest of floodplain, riparian vegetation or soils, riparian associated wetland fens, or 130 feet (the height of one site-potential tree). Manage a 130 feet beyond the RMA buffer (area 3B on map) to provide for a reasonable assurance of windfirmness of the riparian management area. Riparian trees felled for tailholds must be left in place. A watershed or fisheries specialist assisted with the layout of stream and RAW buffers. (BMPs 12.6, 12.6a, and 13.16)

**Soils:**  
**Concern:** Soil compaction and loss of soil productivity from shovel equipment.  
**Mitigation:** Require use of slash to support shovel equipment. (BMP 13.9)

**Wildlife:**  
**Concern:** Unit is within a VCU where legacy forest structure needs to be retained to meet the Forest Plan Standard and Guideline.  
**Mitigation:** Leave 30% (based on area) of the LSTA unit (70 acres) in legacy forest structure. The traversed unit meets this standard and guideline. The RAW buffer (3B) is included in this calculation since the remaining structure maintains old-growth characteristics.

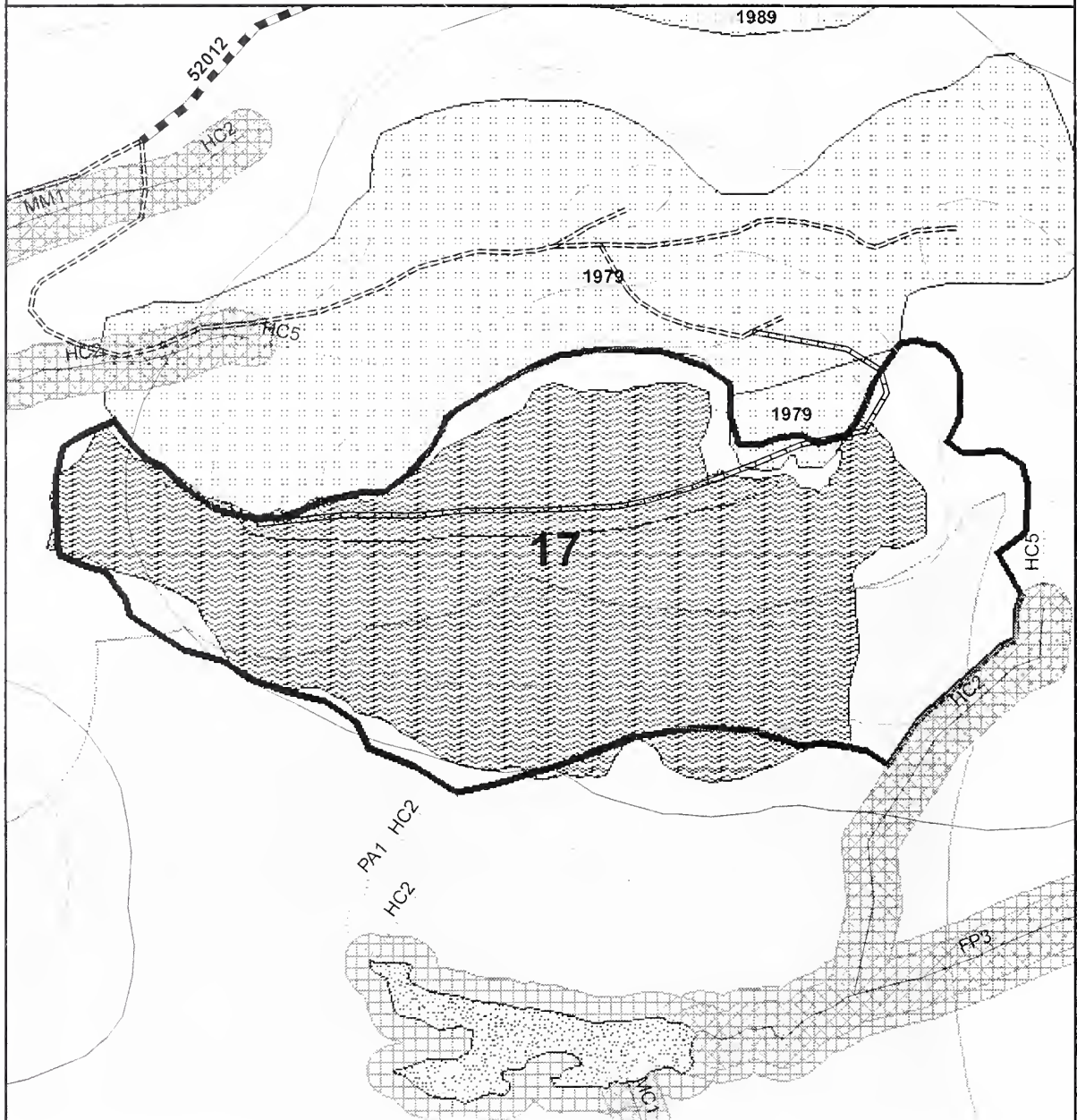
**Scenery:** No concerns.

**Layout and Contract:**  
**Concern:** North edge of unit does NOT border to the existing clearcut in all areas due to 1,000' beach buffer.  
**Mitigation:** Unit as traversed avoided the beach buffer.

**Road Access needed:** Build 0.9 mile of temporary road. Road will be decommissioned.

# Baht Timber Sale ROD II

Unit 17



- 2008 ROD Unit
- Traversed Unit
- Inventoried Roadless Area
- Riparian Management Area
- TTRA Buffers

- NFS Road
- Decommissioned Road
- Proposed Temporary Road
- Lakes and Saltwater
- Existing Managed Stands

## Stream Class

- I
- II
- III
- IV

0 500 1,000 Feet

Last updated: May 23, 2008

3



## Unit Data Card – Baht Timber Sale Record of Decision II

<b>Volume Strata Acres:</b> <div style="margin-left: 20px;"> <b>High:</b> 67  <b>Medium:</b> 12  <b>Low:</b> 21         </div>	<div style="text-align: center;"> <b>Unit Acres:</b> 100  <b>Traversed Acres:</b> 77         </div>	<b>Unit Number:</b> 17 <div style="text-align: right;"> <b>Estimated</b> 1473  <b>Net Volume/unit:</b> MBF         </div>
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**Unit Development and Stand Description:**  
 Wind-influenced stand with multiple canopy layers. The overstory is composed of western hemlock, Alaska yellow-cedar, and Sitka spruce. The midstory is composed of Alaska yellow-cedar and western hemlock. Hemlock dominates the understory. The stand is fully stocked with 308 TPA (196 TPA > 9" DBH) and 293 sq. ft. BA/acre. Species composition is approximately 52% hemlock, 5% Sitka spruce, and 43% Alaska yellow-cedar. Net-volume growth is static or declining due to high levels of dwarf mistletoe infection and decay fungi. The risk of windthrow is high. Even-aged systems are appropriate regeneration methods for this stand.

**Stand Management Objectives:**  
 Contribute to even-flow sustained yield of timber resources and create stand of vigorously growing trees with a diverse species mix as directed for the TM LUD in the Forest Plan. Regenerate the stand using the clearcut method with natural regeneration. Lay out unit to windfirm boundaries. No salvage will occur in RMAs. Evaluate stand for PCT in year-15 for possible treatment in year-20. Favor cedars and spruce in PCT operations.

**Fisheries and Water Quality:**  
**Concern:** There is a Class II (HC2) stream located along the southern unit boundary.  
**Mitigation:** Provide at least a 100-foot no-harvest buffer adjacent to this stream. Consult a water quality or fisheries specialist for implementation of buffers during unit layout. No RAW buffer is required, due to prevailing wind direction. Additional stream flagging and inventory will be necessary during layout. (BMP 13.16)

**Concern:** Temporary road has Class II crossing and segment of road in RMA area.  
**Mitigation:** An adequate fish passage structure is needed and should limit impact to RMA of Class II stream located at beginning of the temporary road. Immediate removal of all fish passage structures will be necessary after logging operations have been completed.

**Soils:**  
**Concern:** None  
**Mitigation:** None

**Wildlife:**  
**Concern:** Part of the unit is within a VCU where legacy forest structure needs to be retained to meet the Forest Plan Standard and Guideline.  
**Mitigation:** Leave 30% (based on area) of the LSTA unit within VCU 4570 (21.5 acres) in legacy forest structure. The traversed unit does not meet this standard and guideline. An additional 6.5 acres of legacy forest structure will be identified and retained on the western edge before the unit is offered for sale.

**Scenery:** No concerns.

**Layout and Contract:** No concerns.  
 Unit as traversed abuts the existing managed stand.

**Road Access needed:** 1.4 miles of temporary road. Build 1.4 miles of temporary road. Road will be decommissioned.







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